

**DRAFT**

**CONTENT SPECIFICATION FOR METADATA**  
**IN THE**  
**NATIONAL COASTAL DATA DEVELOPMENT CENTER'S**  
**DATA CATALOG**

Version 1.0

December 2002

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## **1.0 INTRODUCTION**

The National Coastal Data Development Center (NCDDC) provides access to the long-term coastal data record. NCDDC works closely with Federal, State and local agencies, academic institutions, non-profit organizations, and private industries to create a unified catalog of coastal data sets. The purpose of this metadata specification is to assure uniformity among metadata records contained in the NCDDC Data Catalog. NCDDC shall use this metadata specification to document data accessible through the NCDDC.

### **1.1 Objective**

This metadata specification is to be used in conjunction with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata (CSDGM). The objective is to identify changes in the use of or requirement of CSDGM standard elements and to identify and define extended elements to the CSDGM that are required for data accessible through the NCDDC Data Catalog. Production rules for the use of extended elements within the structure of the CSDGM are also provided.

### **1.2 Applicability**

This specification applies to all coastal data sets available through the NCDDC Data Catalog. Standard and extended elements in the metadata provide data search criteria and support data access and distribution. NCDDC requires that all metadata loaded into its Data Catalog be in the format of this specification. Data providers are encouraged to submit metadata in accordance with this specification. However, information for some extended elements (i.e., Gateway Identification) may not be supplied by data providers and, therefore, may be completed by NCDDC.

### **1.3 Related Standards**

The basis for the Content Specification for Metadata in the National Coastal Data Development Center's Data Catalog is the FGDC CSDGM (FGDC-STD-001-1998). This specification can also be used with the two established profiles to the CSDGM, the Biological Profile and the Shoreline Metadata Profile.

### **1.4 Specification Development**

This document is the initial version of the metadata specification for the NCDDC Data Catalog. Revisions to this specification may be required when the spatial data model is fully implemented within the NCDDC middleware. Future revisions may include the conditionality change from "mandatory if applicable" to "mandatory" for Data Quality Information, Spatial Data Organization Information, or Entity and Attribute Information. Therefore, to limit the need to reevaluate and reload records into the NCDDC catalog, initial metadata records should be as complete as possible and in compliance with the FGDC CSDGM.

## **1.5 Specification Maintenance**

The NCDDC shall revise this metadata specification as necessary. Future changes to the FGDC CSDGM, which may impact the structure of metadata records in the NCDDC Data Catalog, will be incorporated into future versions of this document. A PDF version of this publication is available online from [www.ncddc.noaa.gov/docs/ncddcmdprofile.pdf](http://www.ncddc.noaa.gov/docs/ncddcmdprofile.pdf).

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## **2.0 ELEMENTS OF THE CONTENT STANDARD FOR DIGITAL GEOSPATIAL METADATA**

All standard elements of the CSDGM are available for use in the NCDDC metadata specification. All mandatory elements in the CSDGM must be provided in metadata used in the NCDDC Data Catalog. In addition, several CSDGM standard elements have conditionality changes and become mandatory under this NCDDC specification (see section 3.0). Also, extended elements have been added to the CSDGM to incorporate the distribution of data through the NCDDC (see section 5.0).

## **3.0 CONDITIONALITY CHANGES TO ELEMENTS IN THE CONTENT STANDARD FOR DIGITAL GEOSPATIAL METADATA**

The CSDGM categorizes standard elements as either mandatory, mandatory if applicable, or optional.

- Mandatory elements must be provided.
- Mandatory-if-applicable elements must be provided if the data set exhibits the defined characteristic.
- Optional elements are provided at the discretion of the metadata producer.

Conditionality (optionality) changes to several standard elements in the CSDGM are required for metadata included in the NCDDC Data Catalog. These changes are detailed below using the element numbering scheme of the CSDGM for reference. The conditionality of a section or a compound element takes precedence over any subordinate elements that it contains.

#### 1.1.8.10 Online Linkage

The conditionality of the element “Online Linkage” is redefined as mandatory in its parent element “Citation Information” under section 1, “Identification Information.”

Name: Online Linkage

Type: text

Domain: free text

Short Name: onlink

Parent: Citation Information

Conditionality: Mandatory

Definition: The name of an online computer resource that contains the data set. Entries should follow the Uniform Resource Locator convention of the Internet.

#### 1.9 Point of Contact

The conditionality of the compound element “Point of Contact” is redefined as mandatory in section 1, “Identification Information.”

Name: Point of Contact

Type: compound

Short Name: ptcontac

Parent: Identification Information

Conditionality: Mandatory

Definition: Contact information for an individual or organization that is knowledgeable about the data set.

#### 6 Distribution Information

The conditionality of section 6, “Distribution Information,” is redefined as mandatory in this NCDDC specification.

Name: Distribution Information

Type: compound

Short Name: distinfo

Parent: Metadata

Conditionality: Mandatory

Definition: Information about the distributor of and options for obtaining the data set.

#### 7.3 Metadata Future Review Date

The conditionality of the element “Metadata Future Review Date” is redefined as mandatory in the NCDDC specification.

Name: Metadata Future Review Date  
Type: date  
Short Name: metfrd  
Parent: Metadata Reference Information  
Conditionality: Mandatory  
Definition: The date by which the metadata should be reviewed.

#### **4.0 RECOMMENDED ELEMENTS**

NCDDC recommends that two standard elements with the conditionality of mandatory if applicable in the CSDGM be completed for metadata loaded into the NCDDC catalog. These include the compound elements Place and Temporal under Keywords in section 1, Identification Information. As these are compound elements, any subordinate elements shall also be completed in accordance with the CSDGM.

##### **1.6.2 Place**

Name: Place  
Type: compound  
Short Name: place  
Parent: Keywords  
Child: Place Keyword Thesaurus  
Child: Place Keyword  
Conditionality: Mandatory if applicable  
Definition: Geographic locations characterized by the data set.

##### **1.6.4 Temporal**

Name: Temporal  
Type: compound  
Short Name: temporal  
Parent: Keywords  
Child: Temporal Keyword Thesaurus  
Child: Temporal Keyword  
Conditionality: Mandatory if applicable  
Definition: Time period(s) characterized by the data set.

## **5.0 EXTENDED ELEMENTS WITHIN THE CONTENT STANDARD FOR DIGITAL GEOSPATIAL METADATA**

All extended elements in the NCDDC specification are associated with the middleware developed and required for data distributed through the NCDDC.

### **5.1 Extended Element Descriptions**

The following are the extended elements added to the hierarchical structure of the Content Standard for Digital Geospatial Metadata. These elements are appended to section 6, "Distribution Information," of the CSDGM.

#### **6.8 NCDDC Access Process**

Name: NCDDC Access Process  
Short Name: NCDDC  
Type: compound  
Child: NCDDC Resource  
Child: Gateway Information  
Parent: Distribution Information  
Optionality: mandatory if applicable  
Repeatability: not repeatable  
Definition: Information required to make the data available online via NCDDC.  
Source: National Coastal Data Development Center

##### **6.8.1 NCDDC Resource**

Name: NCDDC Resource  
Short Name: NCDDCRES  
Type: free text  
Parent: NCDDC Access Process  
Optionality: mandatory if applicable  
Repeatability: not repeatable  
Definition: The NCDDC-specific abstract resource to a metadata record.  
Source: National Coastal Data Development Center

##### **6.8.2 Gateway Information**

Name: Gateway Information  
Short Name: GTWYINFO  
Type: compound  
Child: Gateway Type  
Child: Additional Information URL  
Child: Gateway Resource

Parent: NCDDC Access Process  
Optionality: mandatory  
Repeatability: repeatable  
Definition: Information necessary to access data via NCDDC middleware.  
Source: National Coastal Data Development Center

#### 6.8.2.1 Gateway Type

Name: Gateway Type  
Short Name: GTWYTYPE  
Type: "Data Exchange Infrastructure," "Distributed Ocean Data System," free text  
Parent: Gateway information  
Optionality: optional  
Repeatability: not repeatable  
Definition: A description of the type of middleware used to access the data.  
Source: National Coastal Data Development Center

#### 6.8.2.2 Additional Information URL

Name: Additional Information URL  
Short Name: ADDURL  
Type: free text  
Parent: Gateway information  
Optionality: mandatory  
Repeatability: not repeatable  
Definition: The URL for the additional information page.  
Source: National Coastal Data Development Center

#### 6.8.2.3 Gateway Resource

Name: Gateway Resource  
Short Name: GATEWAY  
Type: compound  
Parent: Gateway information  
Child: Gateway Identification  
Child: Site Identification  
Optionality: mandatory  
Repeatability: repeatable  
Definition: The information required to access specific data through a given middleware.  
Source: National Coastal Data Development Center

##### 6.8.2.3.1 Gateway Identification



Name: Gateway Identification  
Short Name: GTWYID  
Type: free text  
Parent: Gateway Resource  
Optionality: mandatory  
Repeatability: not repeatable  
Definition: The NCDDC-specific abstract identifier for a gateway.  
Source: National Coastal Data Development Center

#### 6.8.2.3.2 Site Identification

Name: Site Identification  
Short Name: SITEID  
Type: free text  
Parent: Gateway Resource  
Optionality: mandatory if applicable  
Repeatability: not repeatable  
Definition: Identification information specific to the requested data (i.e. a buoy number, a station ID).  
Source: National Coastal Data Development Center

## 5.2 Examples of the Extended Element Structure

Within the Distribution Information section of a metadata record, the structure of the NCDDC extended elements is provided below in both XML and Text formats.

XML format:

```
<NCDDC>
  <NCDDCRES>oceanographic/TAMUCC/tcoon_87705571</NCDDCRES>
  <GTWYINFO>
    <GTWYTYPE>Data Exchange Infrastructure</GTWYTYPE>
    <ADDURL>tcoonQS.jsp</ADDURL>
    <GATEWAY>
      <GTWYID>corbaloc::squall.ncddc.noaa.gov:2123/DataSource</GTWYID>
      <SITEID>086</SITEID>
    </GATEWAY>
  </GTWYINFO>
</NCDDC>
```

Text format:

NCDDC\_Access\_Process:  
NCDDC\_Resource: oceanographic/TAMUCC/tcoon\_87705571  
Gateway\_Information:  
Gateway\_Type: Data Exchange Infrastructure  
Additional\_Information\_URL: tcoonQS.jsp  
Gateway\_Resource:  
Gateway\_Identification: corbaloc::squall.ncddc.noaa.gov:2123/DataSource  
Site\_Identification: 086

### 5.3 Production Rules for Extended Elements

From the CSDGM, a production rule specifies the relationship between a compound element, and data elements or other (lower-level) compound elements. Each production rule has a left side (identifier) and a right side (expression) connected by the symbol "=", meaning that the term on the left side is replaced by or produces the term on the right side. Terms on the right side are either other compound elements or individual data elements. The symbols used in the production rules have the following meaning:

Symbol Meaning:

= is replaced by, produces, consists of  
+ and  
( ) optional - the term(s) enclosed is(are) optional  
[ ] selection - select one term from the list of enclosed terms.  
Terms are separated by "|"  
m{n} iteration - the term(s) enclosed is(are) repeated from "m" to "n" times

Terms that are "mandatory if applicable" are identified by the production rule: 0{ term }1. Terms bounded by parentheses, "(" and ")", are optional and are provided at the discretion of the data producer. If a producer chooses to provide information enclosed by parentheses, the producer shall follow the production rules for the enclosed information in accordance with the CSDGM.

The following are the production rules for use of the NCDDC extended elements within the structure of section 6, "Distribution Information," of the CSDGM. The NCDDC extended elements are shown in bold type. Line numbering also is provided for ease in element location.

Distribution_Information =	6
Distributor +	6.1
0{Resource_Description} 1 +	6.2
Distribution_Liability +	6.3
0{Standard_Order_Process} n +	6.4
0{Custom_Order_Process} 1 +	6.5
(Technical_Prerequisites) +	6.6

(Available_Time_Period) +	6.7
0 {NCDDC Access Process} 1	6.8
 NCDDC_Access_Process =	 6.8
0 {NCDDC_Resource} 1 +	6.8.1
1 {Gateway_Information} n	6.8.2
 Gateway_Information =	 6.8.2
(Gateway_Type) +	6.8.2.1
Additional_Information_URL +	6.8.2.2
1 {Gateway_Resource} n	6.8.2.3
 Gateway_Resource =	 6.8.2.3
Gateway_Identification +	6.8.2.3.1
0 {Site_Identification} 1	6.8.2.3.2

## 6.0 REFERENCES

Biological Data Working Group, Federal Geographic Data Committee, and USGS Biological Resources Division; Content Standard for Digital Geospatial Metadata Part 1: Biological Data Profile; Federal Geographic Data Committee, Washington, D.C.; FGDC-STD-001.1-1999; pgs. 54; October 1999.

Federal Geographic Data Committee; Content Standard for Digital Geospatial Metadata; Federal Geographic Data Committee, Washington, D.C.; FGDC-STD-001-1998; pgs. 85; June 1998.

Marine and Coastal Spatial Data Subcommittee, Federal Geographic Data Committee; Shoreline Metadata Profile of the Content Standard for Digital Geospatial Metadata; Federal Geographic Data Committee, Washington, D.C.; FGDC-STD-001.2-2001; pgs. 72; June 2001.